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Clmpto 02232006 PY

VIII. A sound source apparatus having operation blocks composed of softwares used to compute waveforms for

generating a phendity of musical more through a phirality of change according to performance information the upper

country according to performance informations the apparents comprising:
a sensing device for sensing an algorithm which determines
a system composed of selective ones of the operation
blocks systematically contributed with cards existe
compute a waveform specific to one of the emisical
travels.

designating device responsive to the performance infer-mation for designating one of the channels to be used to for greensing said one musical tone; and

or generating said one musical true; and
a enserating device for allocating the selective operation
blocks to said one channel and for systematically
a ceruing the allocated acheeing operation blocks
according to the acheeing operation and acheeing acheeing the acheeing operation acheeing the acheeing operation acheeing ac

said one channel.

2. A second source apparatus according to claim 1, wherein the senting drains sate different algorithms which determine different systems corresponding to different statement of the mutical tones, each of the different systems being composed of selective ones of the operation blocks which are actionably combined with eatherdar in compute a waveform which is provide to a corresponding one of the different strabers.

3. A count numbers.

different simbres.

3. A sound source apparatus socioniling so chains 2, wherein in the setting device compelies a descrimining device that dreemines a first system combining a great number of operative blocks and corresponding to a regular simbre said that descrimines a accord system combining a sensil cumber of operation blocks and corresponding to a substitute simbre, in and a changing device operative whom a number of operation blocks erocutable in the changed in Harded under said great erapher and over said small cumber due to a total of the computation of the waveform for changing the musical some from the regular timbre to the substitute limbre so that the scored system is adopted for the channel in glace of the first

A A sensed source apparatus according to claim L wherein
the sening chevice comprises an adjusting device operative
dependently on a condition during the course of generating. the munical time for adjusting a stantor of the operation blocks to be allocated to the channel.

S. A accurd source apparatus according to claim 4, wherein
the adjusting device comprises a modifying device that
modifies the algorithm to eliminate a predetermined one or or
more of the operation biblic farefixed in the system so as so
reduce a compary of the operation blocks to be leaded into the
channel for adjustment to the condition.

channel for adjustment to the condition.

6. A nound source apparatus according to claim 4, wherein
the adjusting device operators when the condition indicates to
that an amplitude covelage of the waveform stremates
helion a producerational direathoral level for compacting the
system on an to achieve the sension of the operation blocks.

7. A sound source apparatus scoonling to claim 4, wherein
the adjusting device operatus when the condition indicates 13
that an operature when or the empire tone in transfer below a

that an output volume of the musical case is transf below a pendescrimined threshold level for compacting the system so as no reduce the number of the operation blocks.

8. A sound course apparents attending to childs 4, wherein the adjusting device operates when the condition indicates that at least one of the operation blocks declines to become coactive in the ayeasts without substructally affecting other operation blocks of the system for eliminating said at least con observing species to be appeared to the current seems of the

1. A sound source apparatus according to claim 1, whereis the generating device comparises a computing device season-

sive to a ranchie sampling frequency for executing the operation blocks in successively compute samples of the sweethern or synchronization to the variable sampling frequency to us to generate the maximal tens, and a controlling device that such the variable sampling frequency amorting in process of competition of the savechome by the operation between the sampling frequency amorting in process of competition of the savechome by the operation between the sampling frequency amorting the persistent of the savechome by the operation of the savechome by the operation

blocks.

10. A sound across appearate according to chim 1, wherein the generating Cavine competers a computing device responsive to a variable sampling frequency for executing the operation blocks to successively compute samples of the waveform to appearate to to the variable. sampling frequency so as to greatest the market toos, and a controlling device for adjusting the variable sampling frequency dependency on a load of comparation of the wavefurm during the course of generating the market tone. 11. A sound source apparatus according to chim 1.

11. A sound source apparates according to their 1, wherein the generating device comprises a computing device responsive to a variable sampling frequency for exercting the operation blocks to escensively compute sampling frequency and to personal the multiple block, and a montrolling device for adjusting the variable sampling frequency according to reach of computation of the samples drang the course of generating the musical toos.

12. A sound source apparatus according to claim 1, whereis the generating device comprises a companing device expectative to a variable sampling frequency for exercting the operation blocks to successively compute samples of the waveform is synchronization to the variable sampling frequency on as to generate the musical toos, and

samples of the waveform in synchronization to the variable atmepting frequency so as to generate the missical troot, and a controlling device for adjusting the variable sampling frequency dependently on a load of companion during the course of generating the samical tone.

13. A sound source apparents baving a software module read to company amplies of a waveform in response to ampling frequency for generating to missical tone according to performance information, the apparama comprising:

a processor device that periodically executes the software module for successively computing samples of the

models for successively computing samples of the waveform corresponding to a variable sampling fre-quency so as so generate the mealest troop;

query to as a process of manager way, and of comparation imposed as the processor device during the course of generaling the estimal toses, and a controller devices operative according to the detected load for changing the variable sampling frequency to adjust a case of computation of the samples.

argum a rate of computation of the simplific.

14. A sound source appearance according to claim 13, wherein the controller device provides a first sampling frequency when the detected found is retainfully light, and provides a slow sampling frequency when the detected load is retainfully beavy such that the rate of the computation of the samples is reduced by 1/8 where a descress an integral

15. A sound source expenses according to claim 14, wherein the processor device includes a delay device baving wherein the processor device includes a delay device laving a memory for impuring a delay on the waveform to determine a pixth of the musical tops according to the period meson information, the delay device generating a write pointer for successively writing the samples into addresses of the memory and a read pointer for seconstively reading the samples from addresses of the memory to thereby create the delay corresponding to an address gap between the write to pointer and the early pointer, the delay device being respective to the fast sampling theyerony to increases toth of the write pointer and the read pointer by one address for one Art Unit: 2800

sample, otherwise the delay device being ensponsive to the above sampling frequency to interested the wrise pointer by one address a times for one sample.

16. A wood source season season to the delay of the sample.

con actives a times for one sample and to increment the read points by a solid cases for one sample.

16. A sound source appearant according to claim 14. 5 wherein the processor device includes a delay device having a pair of second volume includes a delay device having a pair of second volume as pitch of the musical tone according to the performance estimation, the delay device successively writing the samples of the surveitorm of one musical tone into athlesses of one of the memory regions and accounted to extend to the samples from addresses of the samples from admission of the samples of the samples from the samples of the samples from addresses of the other memory region to discussively writing the samples of it is subject to the samples of the other memory region as accounting to example of the other memory region as accounting to reading the samples from addresses of the other memory region to the same memory region in the color curve to delay while charing the continuous memory region of a particular to the same memory region in the color curve to the same memory region in the color to the processor device exacting to chize 13, to where it the processor device exacting to the same memory region of the same device according to chize 13, and the same device according to the same senting as comparing the waveform the processor device successively comparing the waveform the processor device being operative which on the same instance of the sub-emodules declines to become landing as comparation of the waveform for slopping execution of said occombination of the waveform for slopping execution of said

without substantially affecting other sub-modules during as computation of the waveform for stipping assertance of said core sub-module.

18. A sound store apparatus according to claim 14, wherein the protessor device includes a delay device having a memory for imparting a delay to the waveform to denote information information in delay device generating a writer product for successively writing the samples into addresses of the messory and a read positive for successively reading the samples from addresses of the memory to thereby create as the delay device being responsive to the fact samples from addresses of the memory to thereby create as pointer and the read positive, the delay device being responsive to the fact sampling frequency to increment both of the write pointer and the read positive, the delay device being responsive to the fact sampling frequency to increment the write pointer and the read positive by core address for one sample, otherwise the delay device being exponsive to the action sample, otherwise the destry device being exponsive to the action sample of the processor device includes a delay device for impuring a delay to the waveform to determine a pitch of as the employ of one safetal tone between the processor device includes a delay device for impuring a delay of the waveform of the delay device and successively reading the samples of the samples of the delay device and successively reading the samples of the samples from addresses of said summer musical unce for successively writing the samples of the waveform of said souther memory region to the processor waveform of said souther memory region of the delay device and successively reading the samples from addresses of said summer musical unce for successively writing the samples of the waveform of said souther memory region to prepare for a further during the samples from addresses of said summer memory region to prepare for a further during a best waveform of said souther memory region to prepare for a further during a best processin

a processor device reseasable or response to each origger signal and operable to persoducible excusts the software module for successivatly comparing a cumber of samples of the waveform concesponding to the armpling signals within one frame;

deserve device for detecting a lead of computation imposed on the processor device during the course of generating the dissical team;

committee device operative executing to the detected had for varying the frame period to adjust the member of the samples computed within one frame period, and

of the kingles component to each samples signal for converting each of the samples into a corresponding stating signal to thereby gueran the musical tours. 21. A sound source apparatus having adminished com-posed of unfavores used to compute waveforms in gene-posed of unfavores used to compute waveforms in genesting a plurality of consicul conce describe a plurality of channels according to performance indomestion, the apparams comertalog:

sening means for sening so algorithm which determines a mothle commond of whealve come of the submod-

a mounts compared of section coder to compare a state logically connected to each other to compare a wavefurm specific to one of the musical tones, designating means responsive to the performance influ-mation for destignating one of the channels to be used for generating said one musical most and

for generating said one musical most and
generating means the loading the salutative submodules
into said one channel and for higherly curesting the
attorned selective submodules according to the algorithm so as to compute the waveform or thereby gencase said one musical wave through said one channel.
22. A sound source apparent according to chain 21,
wherein the secting means sets different alporithms which
determine different modules corresponding to different ammusical towar, each of the different modules
being composed of scientive ones of the submodules which
see scientively and sequentially consecuted to each other tocompute a waveform which is specific to a conveniending compute a waveform which is specific to a consupunding

can on me caperous univers.

33. A sound sound: appearant eccording to claim 21, wherein the setting cacean comprises adjusting means opening to dependently on a condition through the course of generaling the strategal tons for silpointing a number of the submodules to be leaded into the channel.

supprograms to be supposed such the channel.

2. A mound suppose appearant according to claim 21.

wherein the adjusting across operates when the condition indicates that an amplitude envelope of the waveform are manufacture channel for the compacting the module to as to reduce the camber of the

submodules.

23. A sensed source apparatus according to claim 21, wherein the adjusting means operates when the condition indicates that no comput where of the exested tone is tuned below a predetermined threshold level for compacting the machine as as to reduce the number of the submodules.

26. A count source apparatus according to claim 21, wherein the adjusting enems operatus when the condition indicates that one of the submodules town computation of the wave-form without substantingly affecting other submodules for eliminating said case schemodules to as other statementales for eliminating said con animodule so as to motion the mumber of the calendonics of the loaded into the

cleannes.

27. A sound source appeares baving a software module
used to congues samples of a waveform in response to a sampling frequency for generating a musical tone scording
to performance information, the appearant comprising:

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processor means to periodically execute the software module for successively computing samples of the excellent corresponding to a variable sampling fra-quercy to as to preserve the trained some;

generating the crusters recent during the corne of generating the crusters recent during the corne of generating the crusters rock and

generating the cresical toos; and controller means operative according to the detected had for changing the variable sampling frequency to adjust a rate of computation of the samples.

28. A scand source apparatus according to chine 27, wherein the controller means provides a first sampling frequency when the detected lead is retainedy light, and its relatively light, and its relatively bravy such that the rate of the computation of the samples is reduced by the where o denotes an integer member.

outdoor.

29. A sound source apparates according to chim 28, wherein the processor means includes delay means having a memory the imparting a fellay to the wave form to determine a pitch of the studied into according to the performance information, the delay means generating a write pointer for accommonly writing the samples into addresses of the memory and a read pointer for somewheely ending the samples from addresses of the memory to thereby create the samples from addresses of the memory to their by screen the

amony and a suid pointer for successively reading the samplas from addresses of the uncreavy to threatly events the delay convesponding to as address interval between the write pointer and the coad pointer, the delay means being responsive to the flast sampling frequency to increment both of the write pointer and the read pointer by every one address for every one sample, otherwise the delay means being responsive to the slow sampling frequency to increment the write pointer by every one address at a times for repeatedly writing one sample into consecutive a address at a times for repeatedly writing one sample into consecutive a address as the waveform to determine a pitch of the meanical time secreting to the performance information, the delay means generating a write pointer for successively writing the samples fore addresses of the memory and a read pointer for successively reading the samples fore addresses of the secretaively writing to the addresses of the memory and a read pointer for successively reading the samples fore addresses of the secretaively means being responsive to the flux sampling frequency to increment both of the write pointer and the read pointer by every one address for reading one sample, they sample frequency to increment both of the write pointer by every one address at a time. For rependelly writing one sample, otherwise the delay means being responsive to the clow samples for outcomes as addresses for reading one sample.

30. A sound source apparetts having a software module

53. A sound source apparatus having a software module and to compute samples of a waveform for generating a mainful stook, the apparatus comprising:

provider means for variably providing a trigger signal at a relatively slow rate to define a frame period between 20 successive trigger signals, and flat periodically providing a sampling signal at a relatively flat rate such than a plurality of sampling signal occur within one frame variod:

paractic mean resettable in response to each rigger an signal and operable based on each sampling signal to periodically execute the software module for rescen-sively out-puting a resultance period; within one frame period;

detector muses for detecting a load of computation 65 imposed on the processor muses during the curse of generating the musical sons;

controller means operative according to the descried load On verying the frame period to action the number of the samples computed within one frame period, and

converting each of the samples into a corresponding something each of the samples into a corresponding acting in thempy greates the massest topes and source apparatus being a softwar enclude used to company samples of a waveform for generating a mutical tree, the apparatus comprising

provides means for periodically providing a tragger again at a ministryly show the or define a frame period between excessive trigger signals, and for periodically providing a simpling algoral at a celularity first case such that a plurality of sampling signals occur within one frame period;

trains person; normor means rescrible in response to a trigger samal and operable in response to each sampling signal to periodically assertes the software module for successively computing a number of samples of the waveform within one frame period; and

converter manus reponsive to each sampling signal for convening each of the samplus into a corresponding enting signal to thereby generus the qualical sones.

to processor extens control outsy means having a part of memory regions for imparting a delay to the wave-form to determine a pitch of the meanical true according to the performance information, the delay means con-cessively writing the accepta of the wareform of one sensions toom from addresses of one of the memory regions and successively reading the samples from addresses of the same mimory region to thereby create the delay, the delay manus being operative when the processor means is reset so that said one musical tone is suchehed to emother crusical tone for successively writing the samples of the waveform of said arother musical tone into addresses of the other memory region and successively reading the eaughts from addresses of the same memory region to thereby create the delay wills clearing the one memory region to prepare for a further musical tone. 3. A method said tone.

33. A method using submodulus componed of softwares to compute waveforms for generating a plurality of causical costs through a plurality of channels according to perfor-nance information, the method comprising the surpe of:

string an algorithm which describes a module com-posed of selective cose of the schmodules ingically composed to such other to compan a waveform spe-cific to cose of the mutical coses.

designating one of the channels to be used for generating d can musical toes in emposes to the performance

loading the selective submodules into said one channel:

logically executing the tracked netective submodules according to the algorithm so as to compute the wave-form to throthy generate axid one musical none through said one channel.

said one channé.

34. A suchod according to claim 33, wherein the step of setting sets different algorithms which determine different modules corresponding to different tenhers of the musical tenes, each of the different modules being composed of selective cope of the subscribble which are sciencively and acquentially connected to each other to compute a waveform which is apositio to a corresponding one of the different furthers.

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13. A control according to claim 33, wherein the step of senting comprises rejusting a centre of the submodules to be bashed into the chancel dependently to a condition dring the count of growing the musical most.

18. A method according to chim 13, wherein the step of adjusting comprises compacting the musical most.

18. A method according to chim 13, wherein the step of adjusting comprises compacting the module so as to reduce the marghingh control in the exventions attenued because a partnershed devalued level.

17. A method according to chim 13, wherein the step of adjusting comprises computing the module so as to reduce the number of the submodules when the condition indicates the step control of the musical time is timed below a predesenment deschoid level.

18. A certhod according to chim 15, wherein the step of adjusting comprises of the musical time is tuned below a predesenment deschoid level.

18. A certhod according to chim 15, wherein the step of adjusting comprises of the musical time is tuned below a broadcal time the condition indicates that said at least one achieved when the condition indicates that said at least our achieved when the condition indicates that said at least one achieved when the condition indicates that said at least one achieved when the condition indicates that said at least one achieved when the condition indicates that said at least one achieved when the condition in the condition in the condition of the wave-form without astractably affecting other submodules.

19. A carched using a burdware processor as a software 30.

39. A certhod using a bandware processor and a software 30 codes to compute samples of a waveform in emposes to a sampling frequency for generating a musical tone according to performance information, the method comprising the

periodically operating the hardware promises to execute the software models for successively computing samples of the wavefrom corresponding to a variable sampling frequency so as to generate the consteal storidescribes a load of computation imposed on the burdware processor during the course of generating the emulcul 30

bos usca changing the variable sampling frequency eccording to the descried lead to adjust a rate of computation of the

Samples.

A method according to claim 39, wherein the step of changing provides a fast sampling frequency when the detected lead is relatively light, and provides a slow sampling frequency when the detected lead is relatively beavy.

41. A method using a hardrance processor having a soft-ware modulo used to compute samples of a waveform for generating a musical time, the method comprising the steps of

variably providing a trigger signed at a relatively slow rate to define a trame period between successive trigger

periodically providing a sampling signal at a relatively fast rate such that a plurality of sampling signals occur willing one these period;

operating the bardware procussor rescussion in response to 10 operating the hardware promision relatable in exposure or each integer signal and operable based on each stan-pling signal to periodically execute the software mod-als for seconsively comparing a despite of samples of the waveform which one frame period: detecting a load of comparation imposed on the software processor during the course of generating the similars!

varying the frame period according to the detected load to adjust the number of the samples computed within one frame period, and

trans period, and
convening each of the samples into a consupositing
training signal in response to each sampling signal to
thereby generate the crudest tones.

42. A control utlag a bardware processor having a suffiware models exod to compute samples of a waveform for at
generating a crudical ston, the certhod comprising the steps
of:

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periodically providing a trigger algost as a relativity slow eats to define a frame period between successive trigger

periodically providing a sampling signal at a relatively few rate both that a planskip of sampling signals occur writes one frame period;

operatorig the bardware processor rescriable in response to a trigger legist and operable based on cach sampling segnal to particlelly nazonia the software module for estronively comparing a mather of samples of the wavefam within one frame pends, and

converting each of the samples icon a corresponding enalog segnal in cospone to each sampling signal to thereby generate the existent tones, wherein

thereby generate the crusical tones, wherein the step of operating includes delay step using a pair of corrowy regions for incorating a delay on the wavefame to the performance information, the delay to the wavefame to the performance information, the delay step tonessively writing the samples of the wavefarm of one musical store into addresses of one of the memory region and stocksafely reading the samples from addresses of the samples from addresses of the same memory region to thereby create the delay, the delay step responding when the hardware processor is must to that said one smitted tone is switched to account musical lone for successively writing the samples of the wavefarm of said another musical toge into addresses of the samples from addresses of the samples from addresses of the same memory region to thereby create the delay while thereing the one memory region to prepare far a wall of their processively writing the same memory region to prepare for a

ins saim musury region to introvy curse the chap while destring the one entmoy region to prepare the a further musical tone.

43. A markine randalite media for use in a processor rachine methoding a CPU, asid media containing program excluse mending a CPU, said media containing program instructions executable by said CPU for causing the processor machine having submodules computed of submodules computed of submodules computed waveforms for performing operation of generating a phenishy of medical most through a plurality of character seconding to perform not through a plurality of character seconding to perform not of the content of the c tion comprises the steps of:

acting as eignitism which determines a module com-posed of admitive ones of the submodules togically connected to each other to compute a waveform specase to one of the musical tones;

designating one of the channels to be used for generating unit one musical tone in response to the performance information:

lording de scienive extendules into said one changel;

Ingically executing the leaded actorcive submodules according to the algorithm no as to compute the wieve-form to thereby generate said con musical tone through

All A matches residue media according to cisim 43, whereis the step of setting sets different algorithms which describes different modules convergencing to different theories of the matches convergencing to different theories of the different modules ores or the mental worst, each of the authorithments being composed of stelective costs of the submodulin which the selectively and sequentially observed to each other to compets a wavefurm which is specific to a corresponding one of the different limpies.

45. A machine cerdable media according to claim 43. 45. A machine residitie ments according to claim 43, whereis the step of sorting comprises edjusting a number of the submodules to be loaded into the channel dependently on a condition during the control of generating the market loved 46. A machine readults media according to claim 43, wherein the step of adjusting comprises compacting the

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module so as to enfuse the number of the submodules when the condition indicates that an amplitude envelope of the waxeform stangards below a productioned threshold level. 47. A carchine resistant module econoling to chim 45, wherein the step of siljusting comprises comparing the module so as to reduce the absolute of the submodules when

merces to go in information are assumed in consumptions was the condition individual an output volume of the merces where it has no transfer threshold level.

45. A merce readable media according to claim 45, wherein the step of adjusting comprises eliminating at least 30 where submodule so as to reduce the sember of the submodule so as to reduce the sember of the submodules so be loaded into the channel when the condition indicates that said at feath one authorized loses constitution in computation of the waveform without substantially affect-

in computation of the waveform without stibutationly streeting other submodules.

49. A machine reachable module for use in a processor continue technicing a CPU, said media containing progress recursions occuration by said CPU for causing the processor machine having a software module to compute samples of a waveform in exacutous to a camping frequency for an optioning operation of generating a nusical tone according to performance information, wherein the operation competers the street of erises the stress of

periodically operating the processor executive to execute
the software module for successively computing to
samples of the waveform corresponding to a variable
sampling frequency so as to generate the musical tone;

continue ground the control of determine the control of combination imbound on the buccasor, students included the first property as an affiliation of the processor. 0000; 400

changing the variable sampling frequency according to the desorted load to adjust a rate of competation of the

the descent test to argust a fair of companions of the samples.

50. A machine reachible media according to claim 4%, 15 wherein the earp of changing provides a fast sampling frequency when the demonstrated load is relatively light, and provides a slow sampling frequency when the detected hand

provides a flow sampling frequency when the detected find is relatively benny,

\$1. A machine readable media for use in a processor of machine including a CPU, said credit containing program instructions executable by said CPU for coming the processor machine briving a uniform module used to compute samples of a waveform for performing operation of generating a musical tree, wherein the operation comprises the street of

variably providing a trigger signal at a relatively show rate to define a frame period between successive trigger

periodically providing a sampling signal at a relatively so fast rate such than a plantility of energing signals occur within one frame period; operating the processor excitator resettable in response to

each trigger nignal and operatio based on each same

ting signal to periodically execute the software mod-ele for seconsorety comparing a number of samples of the waveform within one frame period;

ecting a load of computation imposed on the pr mathins during the course of generating the musical

varying the frame period according to the detected load to adjust the cumber of the samples computed within one frame period, and

converting each of the samples into a corresponding analog signal in cosponae to each sampling signal to

ansing signal in expones to each sampling signal to thereby generate the number tones.

22. A markine reachile media for use in a processor exaction including a CPU, said qualls constituing program increasment extensible by said CPU for causing the processor markine having a software module used to compute samples of a waveform for performing operation of grounding a constant tone, wherein the operation comprises the saga of:

periodically providing a trigger signal as a catalisely show raw co-dribne a frame period between accountre integer SERVE SE

periodically providing a sampling signal as a scholvely first run each that a plurality of sampling signals occur within one frame period;

es operating the processor machines resetting the processor of the state of the sta successively computing a cumber of samples of the waveform within con fractor and

convening each of the samples into a corresponding analog signal in response to each sampling signal to camby generate the consider tools, wherein

camby generate the created toost, wherein the surped operating includes delaying step using a pair of memory engions for impacting a delay to the waveform to determine a pitch of the musical true according to the performance information, the delay step successively writing the samples of the waveform of one musical term into addresses of one of the memory regions and successively reading the samples from addresses of the same memory region to thereby create the delay, the delay step responding when the processes machine is ment so that said one makes to use its matched to according responding to the content to the same to the same particular true. switched to coother cranical toos for successively writing the samples of the waveform of said mother musical toos into addresses of the other memory engine musical toos into otherases of the other memory enfoused morecavity reading the energies from addresses of the same memory region to thereby cream the delay with clearing the one memory region to prepare for a further musical sone.

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Claim 53 (Amended). A system for synthesizing a musical tone according to control information at a given sampling frequency, comprising:

a processor that executes a process of managing the system;

a memory that memorizes a plurility of parameters corresponding to a plurility of sampling frequencies for use in synthesizing the musical tone;

a detector that detects a load imposed on the processor when the processor executes the process; and

a sound source module that generates a waveform of the musical tone based on the control information at one of the plurality of sampling frequencies selected according to the detected load imposed on the processor, the sound source module reading one of the plurality of parameters corresponding to said selected one of the plurality of sampling frequencies from the memory for use in generating the waveform.

Claim 54 (Amended). The system according to claim 73, wherein the processor manages the system and provides the control information by executing a program.

Claim 55 (Amended). The system recording to claim 73, wherein the controller expands the variable period as the detected load of the processor increases.

claims 56-58 (cancelled)

Claim 59 (Amended). A system for synthesizing a musical tone according to control information, comprising:

a processor that executes a process of generating the musical tone based on the control information at a given sampling frequency;

a detector that detects a load imposed on the processor when the processor executes the process; and

a memory that memorizes a plurality of parameters corresponding to a plurality of sampling frequencies for use in generating of the musical tone.

wherein the processor generates a waveform of the musical tone based on the control information at one of the plurality of sampling frequencies selected according to the detected load imposed on the processor, the processor reading one of the plurality of parameters corresponding to said selected one of the plurality of sampling frequencies from the memory for use in generating the waveform.

Claim 60 (Amended). The system according to claim 75, wherein the processor executes the processes according to a program.

Claim 61 (Amended). The system according to claim 74, wherein the controller expands the variable period as the detected load of the processor increases.

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claims 62 – 64 (cancelled)

Claim 65 (Amended). A method of synthesizing a musical tone according to control information at a given sampling frequency by a processor and a sound source module, soid method comprising;

operating the processor to execute a process of managing the system;

memorizing a plurality of parameters corresponding to a plurality of sampling frequencies for use in synthesizing the musical tone;

detecting a load imposed on the processor when the processor executes the process; and

operating the sound source module to generate a waveform of the musical tone based on the control information at one of the plurality of sampling frequencies selected according to the detected load imposed on the processor, the sound source module reading one of the plurality of parameters corresponding to said selected one of the plurality of sampling frequencies for use in generating the waveform.

claim 66 (cancelled)

Claim 67 (Amended). A method of synthesizing a musical tone by a processor according to control information, said method comprising:

on the control information at a given sampling frequency;

detecting a load imposed on the processor when the processor executes the process; and

memorizing a plurality of parameters corresponding to a plurality of sampling frequencies for use in generating of the musical tone,

wherein said step of operating the processor generates a waveform of the musical tone based on the control information at one of the plumlity of sampling frequencies selected according to the detected load imposed on the processor, the processor reading one of the plurality of parameters corresponding to said selected one of the plurality of sampling frequencies for use in generating the waveform.

claim 68 (cancelled)

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Claim 69 (Amended). A medium for use in a system having a processor and a sound source module for synthesizing a musical tone according to control information at a given sampling frequency, the medium containing a program executable by the processor for causing the system to perform a method comprising:

processing a load for managing the system;

memorizing a phyrality of parameters corresponding to a phyrality of sampling frequencies for use in synthesizing the musical tone;

detecting the load imposed on the processor when the processor executes the program; and

parating the sound source module to generate a waveform of the musical tone based on the control information at one of the plurality of sampling frequencies selected according to the detected load imposed on the processor, the sound source module reading one of the plurality of parameters corresponding to the selected one of the plurality of sampling frequencies for use in generating the waveform.

claim 70 (cancelled)

Claim 71 (Amended). A medium for use in a system having a processor for synthesizing a musical tone according to control information, the medium containing a program executable by the processor for causing the system to perform a method comprising:

generating the musical tone based on the control information at a given sampling frequency;

detecting a load imposed on the processor when the processor executes the program; and

memorizing a pharality of parameters corresponding to a plurality of sampling frequencies for use in generating of the musical tone.

wherein said step of generating generates a waveform of the musical tone based on the control information at one of the plurality of sampling frequencies selected according to the detected load imposed on the processor, the processor reading one of the plurality of parameters corresponding to said selected one of the plurality of sampling frequencies for use in generating the waveform.

claim 72 (cancelled)

Art Unit: 2800

Please add claims the following claims:

Claim 73. The system according to claim 53, wherein the processor executes another process of providing the control information to the sound source module at a variable period, the system further comprising a controller that controls the variable period at which the processor provides the control information, according to the detected load of the processor.

Claim 74. The system according to claim 59, wherein the processor executes another process of providing the control information at a variable period, the system further comprising a controller that controls the variable period at which the processor provides control information, according to the detected load of the processor.

Claim 75. The system according to claim 59, wherein the processor further executes a process of managing the system.